Nuclear Green™ Fixable DCS1 *5 mM DMSO Solution*

Catalog number: 17569
Unit size: 0.5 ml

Component	Storage	Amount (Cat No. 17569)
Nuclear Green™ Fixable DCS1 *5 mM DMSO Solution*	Freeze (< -15 °C), Minimize light exposure	0.5 mL

OVERVIEW

Nuclear Green™ Fixable DCS1 is a fluorogenic, DNA-selective and cell-impermeant dye for analyzing DNA content in dead, fixed or apoptotic cells. It is optimized for surviving cell fixation process better than the common DNA dyes such as PI, DAPI, Hoechst, 7-AAD, DRAQ-5, DRAQ-7 or SYBR Green. It contains a DNA-reactive group, thus covalently bonds with DNA. Nuclear Green™ Fixable DCS1 has its green fluorescence significantly enhanced upon binding to DNA. It can be used in fluorescence imaging, microplate and flow cytometry applications. This DNA-binding dye might be used for multicolor analysis of dead, fixed or apoptotic cells with proper filter sets.

AT A GLANCE

Spectral Properties

Ex/Em = 510/532 nm (bound to DNA)

KEY PARAMETERS

Fluorescence microscope

Emission	FITC filter set
Excitation	FITC filter set
Recommended plate	Black wall/clear bottom

SAMPLE EXPERIMENTAL PROTOCOL

Caution: The following protocol can be adapted for most cell types. Growth medium, cell density, the presence of other cell types, and factors may influence staining. Residual detergent on glassware may also affect the staining of many organisms and cause brightly stained material to appear in solutions with or without cells present.

1. Add 2 to 10 µM of Nuclear Green™ DCS1 to fixed, dead, or apoptotic cells (whether in suspension or adherent) and incubate for 15 to 60 minutes.

   Note: In order to determine the optimal concentration that yields the desired result, it is advisable to test a wide range of dye concentrations in initial experiments.

   Optional: Wash the cells twice with Hanks and 20 mM HEPES buffer (HBSS) or a buffer of your choice. Then fill the wells with fresh HBSS or growth medium.

2. Observe the cells using a fluorescence microscope, fluorescence microplate reader, or flow cytometer equipped with the desired filter set.

3. **Optional:** Fix cells with 4% formaldehyde for 20 minutes at room temperature. Wash cells twice to get rid of any fixation solution

EXAMPLE DATA ANALYSIS AND FIGURES

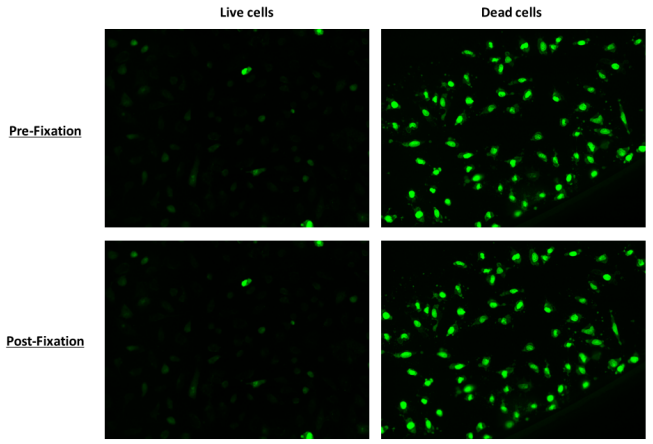

Figure 1. Image of live and dead HeLa cells stained with Nuclear Green™ Fixable DCS1 dye. Images were acquired before and after fixation with 4% formaldehyde by fluorescence microscopy equipped with a FITC filter set.

DISCLAIMER

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